



UNITED STATES PATENT AND TRADEMARK OFFICE

cel

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,232	08/30/2001	James M. Cisar	72255/05858	9345
23380	7590	05/03/2005	EXAMINER	
TUCKER, ELLIS & WEST LLP 1150 HUNTINGTON BUILDING 925 EUCLID AVENUE CLEVELAND, OH 44115-1475			PARK, JUNG H	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/943,232	Applicant(s) CISAR ET AL.	
	Examiner Jung Park	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 2 and 7 are objected to because of the following informalities: The term “domain” should be changed to “division”. Appropriate correction is required.
2. Claims 8, 9, and 10 are objected to because of the following informalities: The claim number “1” should be changed to “6” in the claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molnar et al. (U.S. 6768913, hereinafter “Molnar”) and Suzuki (U.S. 6,836,484).

Regarding claims 1 and 6, Molnar teaches a method, for communicating over a plurality of carriers (*communicating over time division multiple access (TDMA) channels*, col. 5, lines 46-48) between at least one network access point (*base stations 170a-n*, Fig.

1; col. 1, line 15) and a plurality of clients (*mobile terminals 120a-m*, Fig. 1; col. 1, line 18);

monitoring at least one dedicated carrier (*the status of random access channel (RACH) is monitored*, col. 8, line 5) for new clients seeking to associate with network (*mobile units desiring access*, col. 8, line 7);

detecting a new client over the at least one dedicated carrier (*detecting the presence of RACH transmissions from a mobile terminal*, col. 7, lines 64-65);

associating the new client to the network (*assign an idle channel to the new mobile terminal*, col. 8, lines 9-10).

But, Molnar fails to teach explicitly the frequency division multiple access scheme used for the dedicated carriers even though he teaches that radio communication systems can be implemented by any access technology such as frequency division multiple access (FDMA) or CDMA, or some other access schemes (col. 5, lines 50-55). However, Suzuki teaches that a plurality of subcarriers can be used for the dedicated carriers (*references signals on the subcarriers*, col. 2, line 64). It would have been obvious for one of ordinary skill in the art to combine the feature in Suzuki with Molnar for the purpose of using dedicated carriers (FDMA) because one would be motivated to assign dedicated carriers to users seeking to associate with the network.

5. Claims 2, 4, 5, 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molnar and Suzuki as applied to claims 1 and 6 above, and further in view of Hohnstein et al. (U.S. 6816706, hereinafter "Hohnstein").

Regarding claims 2 and 7, Molnar and Suzuki fail to teach explicitly OFDM access scheme used in wireless communication system. However, Hohnstein teaches that wireless link is implemented by any access technology (*including CDMA, TDMA, FDMA, OFDM and the like*, Fig. 1; col. 4, lines 31-35) as will be appreciated by one of ordinary skill in the art. The motivation would be to utilize the orthogonal frequency division multiplexing (OFDM) access scheme for communicating over a plurality of carriers.

Regarding claims 4-5 and 9-10, Molnar and Suzuki fail to teach explicitly an omnidirectional antenna employed on the access point for wireless communication. However, Hohnstein teaches that access point uses many directional antennas, or other antenna (*omnidirectional antenna*, Fig 1; col. 4, lines 14-17). It would have been obvious for one of ordinary skill in the art to combine the feature in Suzuki and Molnar with Hohnstein for the purpose of employing omnidirectional antenna. The motivation would be to apply omnidirectional antenna on the access point to provide a coverage area for wireless communication.

6. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molnar and Suzuki as applied to claims 1 and 6 above, and further in view of Lappetelainen et al. (U.S. 6671495, hereinafter "Lappetelainen").

Regarding claims 3 and 8, Molnar and Suzuki fails to teach explicitly adaptive directional antenna employed on the access point for wireless communication. However, Lappetelainen teaches that adaptive directional antenna (*a significant property of the*

intelligent antenna is the adaptive tuning of the directional pattern of the antenna, col. 5, lines 5-7) is employed on the at least one access point (*it is possible in the access point to monitor moving terminals and try to direct the directional pattern of the antenna towards the terminal*, col. 5, lines 7-9). It would have been obvious for one of ordinary skill in the art to combine the feature in Suzuki and Molnar with the teaching of Lappetelainen in employing adaptive directional antenna. The motivation would be to apply adaptive direction antenna on the access point to provide the monitor function for moving terminals and to direct the directional pattern of the antenna towards the terminal.

Conclusion

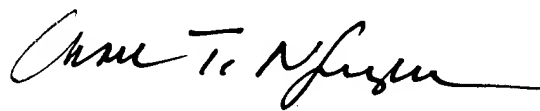
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - U.S. Patent (6430148) to Ring teaches the determination of capacity demand for each channel can be made in a number of ways, for example, by monitoring the whether the “live” traffic in each channel matches the current channel capacity.
 - U.S. Patent (6625134) to Ji et al. teaches the selecting of the available data traffic channels for new mobile stations.
 - U.S. Patent (6628949) to Park teaches that a base station determines whether the call is a new call or a handoff call based on the a channel assignment request from a mobile station.

Art Unit: 2661

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 7:15-4:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung Park
Patent Examiner
April 27, 2005

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600